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REMARKS

The Office Action of November 22, 2005 was received and reviewed. the Examiner is thanked for reviewing this application. Reconsideration and withdrawal of the currently pending rejections are requested for the reasons advanced in detail below.

Claim 72 was pending prior to the instant amendment. By this amendment, claim 72 has been amended, and new claims 73-95 have been added. Consequently, claims 72-95 are currently pending in the instant application, of which claim 72 is independent.

Referring now to the detailed Office Action, the Examiner stated that the Information Disclosure Statement filed October 19, 2004 includes non-patent references that were not considered because no copy of the non-patent publication was provided or a publication date was not shown on all the non-patent publications. In response, Applicants respectfully note that there is an exception to the requirement for the submission of the non-patent documents, as these have already been submitted in the parent application in the IDS filed October 11, 2000 and considered by the Examiner on October 17, 2002. Applicants respectfully direct the Examiner's attention to MPEP §609.04 (a)(II), which is directed to when references in an IDS must be provided. If the Examiner cannot obtain copies of the non-patent publications, Applicants would provide courtesy copies.

With respect to the Examiner's assertion that the IDS filed October 19, 2004 was not found with the received correspondence, Applicants respectfully note that there was no IDS was intended to be filed and, hence, no form PTO-1449 was submitted on October 19, 2004.

Claim 72 stands rejected under 35 U.S.C. §102(b) as anticipated by Schwanz et al. (U.S. Patent 6,189,057 – hereafter Schwanz) or Fieramosca et al. (U.S. Patent No. 5,935,180 - Fieramosca). Further, claim 72 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schwanz or Fieramosca in view of Liebl et al. (U.S. Patent No. 6,236,917 – hereafter Liebl).

With respect to Schwanz, the Examiner asserted that the reference teaches a handheld computer in Fig. 1 and col. 1, lines 32-51. However, Applicants cannot find any references related to a "handheld computer". Schwanz only discloses an accessory interface for transferring serial data to an external accessory device such as a lap top

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computer, an electronic compass, etc. Applicants note that a distinction between a handheld computer and a PC (such as a desktop or laptop computer) can be seen in the description of the present invention starting on page 9, last paragraph, of the specification and Fig. 1, for example.

To further distinguish over Schwanz, Applicants have amended claim 72, as shown above, to further clarify that the adapter includes an adapter housing, and the data port connector is positioned on the adapter housing for direct coupling with the external data port of the handheld computer, wherein the adapter housing is capable of being releasably affixed to the handheld computer to form an integral handheld vehicle data system package when the data port connector is coupled to the external data port of said handheld computer. Further, claim 72 has been amended to include an adapter memory for storing a microprocessor-readable set of instructions for protocol conversion of the data received from the vehicle bus.

In contrast with Applicants' invention as recited in amended claim 72, Schwanz teaches that the accessory interface device connects to, e.g., a PC via a cable interface 22 (col. 2, line 59 of Schwanz) and serves as an interface between the PC and a vehicle's engine control system. That is, Schwanz teaches an interface with a PC using a cable interface and not a direct coupling of a data port connector housed in an adapter housing to the external data port of a handheld computer, as recited in Applicants' amended claim 72.

An advantage disclosed in Applicants' specification is that a handheld computer with the adapter releasably attached forms a small integrated portable package that can be used to inspect and maintain remote equipment (such as at construction site or a mining site). The collected data stored in the portable computer can then be returned to an operation center where the data can be uploaded to a PC for advanced analysis, such as shown in Fig. 1 and at least in the paragraph bridging pages 15 and 16 of the specification. Applicants respectfully submit that the accessory interface device of Schwanz cannot be affixed to a PC to form an integrated handheld vehicle data system package, and the accessory interface device of Schwanz does not offers direct coupling with a handheld device but rather with a lap top PC through a cable and the hence lacks the functionality and portability that Applicants' vehicle data system offers.

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With respect to Fieramosca, the reference teaches a device for testing an electrical test system in a vehicle. The system includes, among other things, a tester 12, which includes a microprocessor, and a translator 14. Translator 14 can be plugged into a communication bus 106 of the electrical system of the vehicle, which utilizes J1850 protocol, for example, as disclosed in col. 7, lines 21-31. However, Fieramosca does not teach, disclose or suggest an adapter microprocessor and adapter memory and a device for connecting to a data bus on an electronically controlled engine.

On page 4, lines 8-9 of the Office Action, the Examiner alleged that Fieramosca discloses an adapter microprocessor for protocol conversion in col. 7, lines 10-31. For convenience, the text of col. 7, lines 10-31 is as follow:

"Per the present invention, the translator unit 104 translates data between the tester microprocessor 92 communication protocol and the bus 106 protocol [*emphasis added*]. Thus, test protocol queries from the microprocessor 92 are translated into vehicle bus 106 format by the translator unit 104, to cause the electronic components of the vehicle to respond appropriately, i.e., to respond as commanded by the test protocol. These responses are translated back to microprocessor 92 format by the translator unit 104 and compared by the microprocessor 92 to test setpoints, to determine whether the vehicle 48 has passed the test.

In one embodiment, the translator unit 104 is implemented by electrical circuitry that translates RS-232 formatted data (i.e., serialized data in a computer protocol form) into J1850 vehicle bus formatted data (i.e., data in a protocol form that can be understood by circuitry in the vehicle 48), and vice-versa, in accordance with principles well-known in the art. It is to be understood that the translator unit 104 can be configured for cooperating with vehicle bus formats other than J1850, as appropriate for the particular vehicle model being tested. It is to be further understood that appropriate ADC and DAC can be used as appropriate."

Fieramosca clearly discloses a microprocessor in the tester 12 and not in the translator, i.e. adapter, 14. The distinction between the tester 12 and the translator is apparent throughout the disclosure of Fieramosca, including Figs. 1-3. As shown in Fig. 1, Fieramosca clearly illustrates translator unit 14 including housing 34 that can be electrically connected to the housing 16 of tester 12 in via connectors or via RF link. Fig. 2 of Fieramosca shows

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microprocessor 92 in tester 12, while Fig. 3 shows components in translator 14 housed translator housing 34, which includes translator unit 104.

Further, Fieramosca discloses translator unit 104 as implemented by electrical circuitry that translate RS-232 formatted data into J1850 and vice versa. There is no suggestion or motivation in Fieramosca for utilizing a microprocessor and memory storing software for implementation by the microprocessor in translator 14 in addition to the microprocessor 92 in tester 12.

In contrast with the electrical circuitry in translator 104 shown in Fig. 3 that merely translates electrically serial data format into J1850 and vice versa in Fieramosca, Applicants' microprocessor-based adapter with memory advantageously provides numerous intelligent interfacing functions between a handheld computer and an engine data bus. For example, Applicants' adapter microprocessor determines the start and stop of messages received from the data bus and further operates to add message identifiers, including delimiting header block having synchronization sequence and a message length to the vehicle data conveyed to the handheld computer, as recited in newly added claims 75, 76, 81 and 82, for example. Further, by employing a microprocessor in the adapter, the adapter can communicate with a number of protocols, such as J1587, J1939 and J1708, such as recited in newly added claims 77, 78 and 80, for example. The functions of the microprocessor in the adapter are controlled via a software stored in the adapter's memory, as recited new claims 87-95, for example.

Consequently, since each and every feature of the present claims is not taught (and is not inherent) in the teachings of Schwanz or Fieramosca, as is required by MPEP Chapter 2131 in order to establish anticipation, the rejection of claim 72, under 35 U.S.C. §102(b), as anticipated by Schwanz or Fieramosca is improper.

With to the §103(a) rejection, the amendments and arguments set forth above in relation to the §102(b) rejection based on Schwanz and Fieramosca are also applicable to the combination of Schwanz or Fieramosca with Liebl.

Liebl was cited as teaching signal levels conversion. Applicants note that the presently claimed invention recites signal level adjustments, and not signal level conversion, in the last clauses of claim 72 of the present application. Hence, Applicants

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presume that the Examiner intended to equate signal level conversion of Liebl to Applicants' claimed signal level adjustment.

In the §103(a) rejection, the Examiner contends that the signal levels conversion taught in Liebl are combinable to cure the deficiency in both the Schwanz and Fieramosca references. However, Liebl fails to make up the shortcomings of the Schwanz and Fieramosca references in that Liebl does not teach, disclose or suggest at least an adapter having an adapter housing for creating a data pathway between a bus connector of a data bus on an electronically controlled engine and an external data port of a handheld computer, an adapter microprocessor positioned on the adapter housing and connected via the data pathway with the bus compatible connector, and an adapter memory for storing a microprocessor-readable set of instructions for protocol conversion of the data received from the vehicle bus, of which Schwanz and Fieramosca are deficient, as discussed above. Further, Liebl teaches a dedicated device that has no separate handheld computer and adapter. Hence, the combination of Liebl with Schwanz or Fieramosca still does not teach all of Applicants' claimed limitations.

It is well settled that when combining the references in order to support a *prima facie* case of obviousness, the references must be considered in their entirety. It is further settled that the mere fact that the prior art may be modified to reflect features of the claimed invention does not make the modification and hence the claimed invention obvious unless the desirability of such modification is suggested by the prior art itself (MPEP §2141).

Moreover, Schwanz discloses and claims the accessory interface with a DC power access terminal 26 for supplying DC power from a vehicle's system to the external accessory device. That is, the accessory interface of Schwanz requires a power terminal to provide power to an external accessory device. On the other hand, Applicants' claimed invention does not require a power accessory terminal. Moreover, Liebl teaches a dedicated handheld diagnostic tool that provides no flexibility of using a handheld computer coupled with an adapter with microprocessor and memory, and Fieramosca is an electrical test system for a vehicle that lacks an adapter with a microprocessor and memory and is not a system that is capable of interfacing with an engine control.

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Applicants respectfully assert that the three cited prior art references teach different features and functions, that the references must be considered in their entirety, and that the desirability of combining their respective different teachings to arrive at Applicants' claimed invention must be suggested. The Examiner has not shown where motivation or suggestion can be found in these references to combine their different devices to make Applicants' claimed invention.

Additionally, the requirements for establishing a *prima facie* case of obviousness, as detailed in MPEP § 2143 - 2143.03 (pages 2100-122 - 2100-136), are: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the teachings; second, there must be a reasonable expectation of success; and, finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations.

As discussed above, Schwanz fails to teach, disclose or suggest at least a handheld computer, the adapter that includes an adapter housing, and a data port connector positioned on the adapter housing for direct coupling with the external data port of the handheld computer, an adapter microprocessor positioned on the adapter housing and connected via a pathway with a bus compatible connector, and adapter memory for storing a microprocessor-readable set of instructions for protocol conversion of the data received from the vehicle buss, wherein the adapter housing is capable of being releasably affixed to the handheld computer to form an integral handheld vehicle data system package when the data port connector is coupled to the external data port of said handheld computer. Further, Fieramosca fails similarly to Schwanz as discussed above and further fails to disclose a vehicle data system for processing and displaying vehicle data transmitted through a bus connector of a data bus on electronically controlled engine operated in accordance with a predetermined bus protocol. Still further, Liebl fails similarly to Schwanz, as discussed above, to teach, disclose or suggest at least the amended features recited in Applicants' claim 72. Therefore, the application of Schwanz, Fieramosca and Liebl in combination or individually fails to teach or suggest all of Applicants' claimed limitation, and, hence, a *prima facie* case of obviousness has not been established.

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Dependent claims 73-95 have been newly added to further complete the scope to which Applicants are entitled. The features recited in new dependent claims further distinguish the presently claimed over Schwanz, Fieramosca and Liebl, as set forth above.

In view of the foregoing, it is respectfully requested that the rejections of record be reconsidered and withdrawn by the Examiner, that claims 72-95 be allowed and that the application be passed to issue. If a conference would expedite prosecution of the instant application, the Examiner is hereby invited to telephone the undersigned to arrange such a conference.

Respectfully submitted,



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